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EXAMINER

JUSKA, C

ART UNIT	PAPER NUMBER
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1771

DATE MAILED:

08/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/228,954

Applicant(s)

Burns, Jr. et al.

Examiner

Cheryl Juska

Group Art Unit
1771



- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

- ☒ Claim(s) 1-63 is/are pending in the application.
- Of the above, claim(s) 1-22, 35-57, and 62 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 23-34, 58-61, and 63 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22 and 49-57, drawn to a layer of a thermoplastic material with polymeric microspheres dispersed therein and a surface covering containing said layer, classified in class 428, subclass 326.
 - II. Claims 23-34, 58-61, and 63, drawn to a carpet having a secondary backing of a thermoplastic material with polymeric microspheres dispersed therein, classified in class 428, subclass 95.
 - III. Claims 35-48 and 62, drawn to methods of making a textile substrate and a surface covering, classified in class 156, subclass 77+.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the thermoplastic foamed layer with microspheres can be made into a self-sustaining lamina and then laminated to the support or substrate layer, rather than directing forming the foam layer directly onto said substrate layer as is claimed.

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3. Inventions of Group II and Group III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the secondary layer of a thermoplastic material with microspheres can be made into a self-sustaining layer and then laminated to the primary layer.
4. Inventions of Group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not capable of use together and the different inventions have different effects in that Group II is specifically limited to a textile substrate, or carpet, with a primary and secondary backing, while Group I is not so limited.
5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
6. During a telephone conversation with Luke Kilyk on July 19, 2000, a provisional election was made with traverse to prosecute the invention of Group II, claims 23-34. It is noted that the telephonic restriction was a four-way restriction. However, upon further review of the application, the claims of Group IV, claims 49-61 and 63, were incorporated into Group I and Group II. Thus, Applicant's election of Group II, claims 23-34, also now includes claims 58-61

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and 63. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-22, 35-57, and 62 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 3,819,463 issued to Ervin et al.

Claim 23 is drawn to a textile substrate comprising (a) a primary backing with textile fibers extending upwardly from the backing and forming a surface, and (b) a secondary backing affixed to the bottom surface of the primary backing, wherein said secondary backing comprises

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at least one thermoplastic material having polymeric microspheres dispersed therein. Claim 24 limits the textile substrate to a carpet.

Ervin discloses a carpet comprising a carpet face (nap) attached to a primary backing (scrim) (col. 1, lines 25-29) and a foamed backing of a thermoplastic material containing "synthetic resinous hollow gas-filled microspheres" (col. 1, lines 29-35). Thus, claims 23 and 24 are anticipated by the cited Ervin patent.

10. Claims 23, 24, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 2 160 422 assigned to Dow Chemical Company.

Claims 23 and 24 have been previously described. Claim 32 limits the secondary backing to further comprise at least one activated blowing agent.

The cited French patent discloses an improved carpet comprising a base gauze (primary backing) with a pile surface on one side and a bonded, foam backing (English abstract). The foam backing comprises synthetic resin microspheres in a thermoplastic matrix (abstract). A volatile fluid expansion agent, or blowing agent, is also disclosed. Therefore, it can be seen that Applicant's claims 23, 24, and 32 are anticipated by the cited French patent.

11. Claims 58 and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,661,691 issued to Slosberg.

Independent claim 58 is drawn to a *surface covering* comprising (a) a primary backing, and overlying and adhered to said primary backing (b) a secondary backing comprising at least one thermoplastic material and at least one activated blowing agent, wherein said secondary

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backing is casted on said primary backing (*no microspheres claimed*). Claim 61 limits the primary backing to a textile substrate.

In the background section of the patent, Slosberg teaches that it is known to use thermoplastic foam secondary backings for carpets (page 43, last paragraph). Said backings are made by casting a vinyl chloride resin containing a blowing agent onto the back of a tufted carpet (page 43, last paragraph). Thus, it can be seen that claims 58 and 61 are anticipated by the cited Slosberg patent.

12. Claims 58 and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,616,138 issued to Wentworth.

Wentworth discloses a thermoplastic foam backing for a carpet which is extruded onto the carpet back (page 61, 3rd paragraph). The foam composition includes a blowing agent in an amount ranging from 3-30% by weight based upon the weight of the thermoplastic resin (page 61, 3rd paragraph).

Claim Rejections - 35 USC § 102/103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. Claim 25 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over the cited Ervin and Dow patents, as applied to claim 23 above.

Claim 25 limits it to a broadloom carpet, modular tile, or wide roll carpet. (For purposes of examination, the term "wide roll carpet" is limited to the definition set forth in the specification at page 7, lines 19-20, or a 6 ft. wide roll.)

Although the cited art does not explicitly teach broadloom carpet, modular carpet tile, or wide roll carpet, these types of carpet are well-known in the carpet industry. Applicant is hereby given Official Notice that broadloom, carpet tiles, and wide roll carpet are the conventional forms of carpet. Thus, it is asserted that the Ervin and Dow disclosures to "carpets" inherently include the claimed types of carpet. The burden is upon the Applicant to show otherwise. In the alternative, it would have been obvious to one of ordinary skill in the art to employ the inventions of the Ervin and Dow patents in the conventional forms of carpet, motivated by the application of the inventive foam backing to standard carpet production lines. Therefore, claim 25 is rejected as being anticipated by, or obvious over, the cited art.

15. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Ervin and Dow patents.

Claim 29 limits the textile substrate to having a density of 20-45 lb/ft³, while claim 30 limits it to 20-30 lb/ft³.

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Although neither of the cited patents clearly teach the carpet density, it is reasonable to presume that the carpets of Ervin and Dow are inherently within the density range claimed by the Applicant. Support for said presumption is found in the use of similar materials (i.e., carpet face fibers, primary backing, and thermoplastic foam backing with microspheres) and the like end-products (i.e., a carpet with a microsphere-filled foam backing). The burden is upon the Applicant to prove otherwise. In the alternative, the claimed carpet densities would have obviously have been provided as a result of Ervin's and Dow's disclosed thermoplastic foam with microspheres dispersed therein. Note *In re Best*, 195 USPQ 433, as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102. Therefore, claims 29 and 30 are rejected.

16. Claims 59 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the cited Wentworth patent.

Claim 59 limits the secondary backing to being expanded by about 1.0 to 2.5 times.

As previously mentioned, Wentworth teaches the blowing agent is present in an amount ranging from 3 to 30% based upon the weight of the thermoplastic resin. Applicant teaches the blowing agent present in an amount ranging from 0.5 to 5%. Thus, it is reasonable to presume that the use of Wentworth's blowing agent in an amount ranging from 3-5% would inherently produce a foam expansion of 1-2.5 times. Support for said presumption is found in the use of similar materials (i.e., thermoplastic resins with blowing agent) and similar amounts (i.e., 3-5% blowing agent). The burden is upon the Applicant to prove otherwise. In the alternative, the

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claimed expansion rate would obviously have been provided by the presence of Wentworth's blowing agent. Note *In re Best*, 195 USPQ 433, as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

17. Claims 31 and 33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the cited Dow patent. Claim 60 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the cited Wentworth patent.

Claims 31, 33, and 60 limit the secondary backing and primary backing of claims 23, 32, and 58, respectively, to be affixed such that there is no delamination under ASTM D-3936.

It is argued that in-situ formation of foam backing onto the primary backing would inherently prevent delamination of the primary and secondary backings. Support for said presumption is found in the fact that a cast foam backing would penetrate the interstices of the primary backing, thus preventing delamination of said secondary backing. The burden is upon the Applicant to prove otherwise. In the alternative, the claimed lack of delamination would obviously have been provided by the casting of the foam backing in the cited Dow or Wentworth patents. Note *In re Best*, 195 USPQ 433, as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

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Claim Rejections - 35 USC § 103

18. Claims 26, 27, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Ervin and Dow patents in view of J. Levinstein's *The Complete Carpet Manual*, page 27 and L. Shoshkes' *Contract Carpeting*, Chapter 4, pages 60-67.

Claim 26 limits the textile substrate to further comprise at least one adhesive or polymeric pre-coat layer located beneath the primary backing. Claim 27 further limits the substrate of claim 26 to comprise at least one intermediate backing layer located beneath the adhesive or pre-coat layer.

Independent claim 63 is drawn to a surface covering comprising (a) a primary backing, (b) at least one adhesive or polymeric precoat layer, (c) optionally, at least one intermediate backing layer, (d) optionally, at least one reinforcement layer or stabilizing layer, (e) a secondary backing comprising at least one thermoplastic material, wherein polymeric microspheres are dispersed in at least one of the layers except the primary backing.

Ervin and Dow do not explicitly teach the limitations of claims 26, 27, and 63. However, said limitations are well-known in the art of carpeting. For example, Levinstein teaches a conventional carpet is constructed of (a) face fibers tufted into a primary backing, (b) a backcoat of adhesive applied thereto to seal said fibers to said primary backing, and (c) a secondary backing for dimensional stability (Levinstein, diagram on page 27). Additionally, Shoshkes discloses a like carpet construction at Figure 34, page 61. Furthermore, Shoshkes teaches that many carpets conventionally have an attached cushion, or foam backing (page 65 of Shoshkes).

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Therefore, it would have obvious to one of ordinary skill in the art to employ an adhesive or pre-coat to the primary backing and to apply a secondary backing thereto before applying the inventive foam backings. Motivation to do so would be to securely bond the pile fibers into the primary backing and to add dimensional stability to said carpet. Therefore, Applicant's claims 26, 27, and 63 are rejected as being obvious over the cited prior art.

19. Claims 26-28 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Ervin and Dow patents in view of US 5,545,276 issued to Higgins.

Claims 26, 27, and 63 have been previously described. Claim 28 further limits the substrate of claim 27 to comprise at least one reinforcement material layer or stabilizer layer located beneath said intermediate backing layer.

Although the Ervin and Dow patents do not explicitly teach the limitations of claims 26-28 and 63, said limitations are well-known in the art. For example, Higgins discloses a carpet comprising (a) a pile layer, (b) a primary backing, (c) an adhesive backcoat, (d) an adhesive layer for attaching (e) a reinforcement layer, (f) a foam layer, and (g) a secondary backing. Thus, it would have been obvious to one of ordinary skill in the art to employ the an adhesive pre-coat, or backcoat, layer, an intermediate layer, and a reinforcing layer between the primary backing and the inventive foam cushion layer. Motivation to do so would be to aid in bonding the pile fibers to the primary backing and to add dimensional stability by way of the intermediate and reinforcement layers. Therefore, claims 26-28 and 63 are rejected as being obvious over the cited art.

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20. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Dow patent in view of US 5,407,617 issued to Oppermann et al.

Claim 34 limits the blowing agent to be present in an amount ranging from 0.5 to 5.0 parts per 100 parts by weight of the thermoplastic material.


Dow does not explicitly teach an amount for the blowing agent. Thus, one would look to the prior art for an appropriate amount to employ. For example, Oppermann teaches a thermoplastic foam for floor coverings which includes a blowing agent in an amount of 0.5 to 7 parts by weight per 100 parts of thermoplastic resin (abstract). Thus, it would have been obvious to one of ordinary skill in the art to employ the blowing agent of the Dow patent in an amount as is taught by the prior art of Oppermann, with the expectation of obtaining a suitable amount of foam cushioning for a carpet backing. Therefore, claim 34 is rejected as being obvious over the cited prior art.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is (703) 305-4472. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached at (703) 308-2414. Fax numbers for this Group are (703) 305-3601 and (703) 305-7718.

cj

July 31, 2000



CHERYL JUSKA
PATENT EXAMINER